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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/805,230	03/22/2004	Sang-Il Park	61610119US	9030
58027	7590	09/13/2006	EXAMINER	
H.C. PARK & ASSOCIATES, PLC			HODGES, MATTHEW P	
8500 LEESBURG PIKE			ART UNIT	
SUITE 7500			PAPER NUMBER	
VIENNA, VA 22182			2879	

DATE MAILED: 09/13/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/805,230

Applicant(s)

PARK ET AL.

Examiner

Matt P. Hodges

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 20 June 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-21 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-8, 10-18, 20 and 21 is/are rejected.
- 7) ☒ Claim(s) 9 and 19 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 22 March 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Response to Amendment

The Amendment, filed on 6/20/2006, has been entered and acknowledged by the Examiner.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claims 1, 3, 6, 7, 10-13, 16, 17, 20, and 21 are rejected under 35 U.S.C. 102(e) as being anticipated by Park et al. (US 6,870,186)

The applied reference has a common inventor with the instant application. Based upon the earlier effective U.S. filing date of the reference, it constitutes prior art under 35 U.S.C. 102(e). This rejection under 35 U.S.C. 102(e) might be overcome either by a showing under 37 CFR 1.132 that any invention disclosed but not claimed in the reference was derived from the inventor of this application and is thus not the invention “by another,” or by an appropriate showing under 37 CFR 1.131.

Regarding claims 1, 3, 6, 7, 10, 13, 16, and 17, Park discloses (see figure 11) an organic EL device including a substrate (410), a third pixel electrode (414), a first pixel electrode (440), and a second pixel electrode (438). The first pixel electrode is composed of AlNd. (Column 13

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lines 5-10). Further the second pixel covers the entire top surface of the first pixel while the first pixel covers the entire top surface of the third pixel. Side surfaces of all three electrodes are tapered. (See response to arguments for more information concerning the language “located on” and “entirely covering”).

Regarding claims 2 and 11, the taper of the side surface travels the full length of the side in the direction of both the top and bottom surfaces. (See figure 11).

Regarding claims 20 and 21, Park discloses the use of the 3 pixel electrodes described above (see rejection of claim 6 above) and further discloses that each has a taper along the side surface that is in a direction both upwards and downwards with respect to the device.

Regarding claim 12, the first and second pixel electrodes are formed by the same process and shape and likewise by the same mask.

Regarding claims 1, 2, 10 and 11, Park alternatively discloses (see figure 12) the same device as stated above but the first pixel (514b) is tapered and covered by the second pixel (538) without a third pixel.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 4, 5, 8, 14, 15, and 18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Park et al. (US 6,870,186)

Regarding claims 4, 5, 14, and 15, Park discloses the device as claimed (see rejections of claims 1 and 10 above, but does not appear to specify the second electrode being composed of ITO. However it has been held to be within the general skill of a worker in the art to select a known material on the basis of its suitability for the intended use as a matter of obvious design choice. Specifically it would have been known to select ITO for use in electrodes in active matrix OLEDs as their use in flat panel displays is widely accepted. ITO is conductive, readily available in the art and sufficiently transparent towards emitting light. In this instance the second electrode is advantageously transparent to allow for reflectivity off the reflective first electrode made of an aluminum alloy. This transparency provides for greater efficiency in emitting light and device operation. Thus, it would have been obvious at the time the invention was made to a person having ordinary skills in the art to incorporate the use of ITO for the second electrode into the device as disclosed by Park in order to advantageously allow for greater device efficiency.

Regarding claims 8 and 18, Park discloses the device as claimed (see rejections of claims 1 and 10 above, but does not appear to specify the third electrode being composed of nickel. However it has been held to be within the general skill of a worker in the art to select a known material on the basis of its suitability for the intended use as a matter of obvious design choice. Specifically it would have been known to select nickel for use in electrodes in active matrix OLEDs as their use in flat panel displays is widely accepted. Nickel is conductive, readily available, and relatively inexpensive. In this instance the third electrode is advantageously highly conductive and made of a less expensive conductor to lower device cost. Thus, it would have been obvious at the time the invention was made to a person having ordinary skills in the

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art to incorporate the use of nickel for the third electrode into the device as disclosed by Park in order to advantageously lower device cost.

Allowable Subject Matter

Claims 9 and 19 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

The following is a statement of reasons for the indication of allowable subject matter:

Regarding claim 9, the references of the Prior Art of record fails to teach or suggest the combination of the limitations as set forth in claim 9, and specifically comprising the limitation of an organic EL device including a third pixel electrode where the third pixel electrode is constructed from ITO.

Regarding claim 19, the references of the Prior Art of record fails to teach or suggest the combination of the limitations as set forth in claim 19, and specifically comprising the limitation of the manufacture of an organic EL device including a third pixel electrode where the third pixel electrode is constructed from ITO.

Conclusion

As previously indicated allowable subject matter has been newly rejected, this action is made non-final.

Response to Arguments

Applicant's arguments filed 6/20/2006 have been fully considered but they are not persuasive.

Regarding applicant's assertion that the first and second electrodes are not located on the electrode preceding them, the examiner respectfully disagrees. The broadest reasonable definition of the phrase "located on" as interpreted by the examiner would be to be placed above and supported by the second layer. As such, it is not required that the layers actually be in contact, so long as the second layer in some way (either independently or in conjunction with intermediate layers) supports the first layer. For future reference it is conceivable that both an anode and cathode could independently be called pixel electrodes (as each electrode controls the pixel element).

Regarding applicant's assertion that the first and second electrodes are not entirely covering the electrode preceding them, the examiner respectfully disagrees. The broadest reasonable definition of the phrase "entirely covering" as interpreted by the examiner would be to be a layer in a position to fully shield or protect a second layer. As before, it is not required that the layers actually be in contact, so long as the second layer is fully protected by the first layer. In this regard it is important to understand the layers in light of the structure of the prior art. In Park, each electrode covers the entire opening (the gap between neighboring ramparts) above the electrode below itself. A more strict interpretation of "entirely covering" would have to include a surface that covers all surfaces of the second electrode. For examples covering 6 surfaces of a rectangular electrode. As this situation is not disclosed by the applicant's specification it is not assumed to the proper interpretation of the phrase. Further applicant's

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assertion that by not covering the tapered surfaces of the lower electrode, the first electrode would not protect the electrode from electrolyte solution, the examiner respectfully disagrees. While the functional language is not specifically claimed, it is still noteworthy that fluid placed on the upper electrode would still be blocked from penetrating to the bottom electrode by the first electrode and the ramparts.

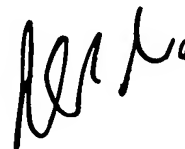
Contact Information

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Matt P Hodges whose telephone number is (571) 272-2454. The examiner can normally be reached on 7:30 AM to 4:00 PM M-F.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Nimesh Patel can be reached on (571) 272-2457. The fax phone number for the organization where this application or proceeding is assigned is (571) 273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

mph



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